

<b>Interview Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/504,330	LEAMON, PAUL H.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Yogesh C Garg	3625	

All participants (applicant, applicant's representative, PTO personnel):

(1) Yogesh C Garg. (3) \_\_\_\_\_.

(2) Attorney David H. Judson. (4) \_\_\_\_\_.

Date of Interview: Nov 19,23,&24 2004.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: \_\_\_\_\_.

Identification of prior art discussed: \_\_\_\_\_.

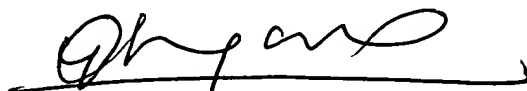
Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Attorney Judson agreed for issuing an Examiner's amendment amending claims 1,3,5,7,13,17,19-22,24,26,28, and cancelling claims 14, 23 and 30-31 so as to put the application in allowance condition. The fax messages received on 11/19/2004 & 11/24/2004 from the applicant during these Interviews are enclosed as part of the Interview Summary.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.



Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

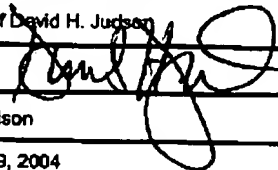
PTO/SB/21 (09-04)

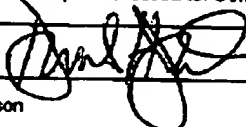
Approved for use through 07/31/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	09/504,330	
	Filing Date	February 14, 2000	
	First Named Inventor	Paul Leamon	
	Art Unit	3625	
	Examiner Name	Garg	
Total Number of Pages in This Submission	4	Attorney Docket Number	

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement  <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.62 or 1.63	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
Remarks Communication to be hand-delivered to Examiner Garg in advance of telephone interview.		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	Law Office of David H. Judson		
Signature			
Printed name	David H. Judson		
Date	November 19, 2004	Reg. No.	30,487

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.			
Signature			
Typed or printed name	David H. Judson	Date	November 19, 2004

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

## PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Leamon  
Serial Number: 09/504,330  
Filing Date: February 14, 2000  
Art Unit: 3625  
Examiner: Garg  
For: **METHOD AND SYSTEM FOR  
SKILL-BASED PLANNING AND  
SCHEDULING IN A  
WORKFORCE CONTACT  
CENTER ENVIRONMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
703-746-7390 (fax)

**COMMUNICATION**

Examiner Garg has requested additional comment or clarification as to how the subject matter of the application differs from Klenke publication.

In the first instance, Klenke is concerned with a completely different problem as compared to that addressed and solved by the present invention. Klenke teaches one of ordinary skill as to how to set up an automatic call distributor (ACD) to enable that ACD to provide or facilitate so-called skills-based call routing. She teaches that one should inventory agent skills and then build a matrix (e.g., Table 2) that links agent skills to caller needs. With this agent skills matrix, the "last step is to set up a routing scheme that allows the caller and agent to come together efficiently." The result of this process is an ACD (or a set of ACD queues) that have been set up to handle incoming calls into that ACD and no other ACD.

## PATENT

In contrast, the present invention assumes that there are multiple workforce sites (e.g., in Figure 1, Dallas and Boston), and that incoming calls (or more generally, contacts) are being shared among those sites. Some routing mechanism exists to distribute the calls among the sites and the problem addressed by the present invention is how to best schedule multi-skilled agents to each such site when the allocation is unknown. This is not the same problem addressed by Klenke. Indeed, the present invention assumes that the ACD at each individual site has already been set up to receive calls, and this ACD "set up" may or may not (it does not matter in the context of the present invention) be based on the Klenke approach.

Stated another way, Klenke is concerned with how to set up a given ACD (within a single site) to provide skills-based routing, whereas the present invention is concerned with how to schedule multi-skilled agents that are expected to work in multiple sites, each of which has its own ACD or set of ACD queues. Call routing and agent scheduling are two separate and distinct problems in this art.

The present invention defines this problem (in claim 1, which is illustrative) as "allocating and scheduling requirements for agents in a skills-based contact center environment organized into a hierarchy of one or more business units at a first level, two or more contact types at a second level, and two or more management units at a third level." This "hierarchy" is illustrated in Figure 1. A "business unit" is an abstract network level construct. In Figure 1, there is a service call BU and a sales call BU. (This is merely representative). Thus, a BU is at a root of the hierarchy. As shown in Figure 1, each BU is associated with a contact type at a second level, and this association is represented by the arrows that connect each BU to the associated call type (in this example, Boston service, and Dallas service). This drawing illustrates the point made above, namely, how, in a preferred embodiment, the present invention is dealing with ACDs at multiple sites (as compared to Klenke, who teaches only how to set up an ACD to do skills-based routing at a single site, as noted above). Figure 1 also illustrates the next or lower level of the hierarchy, as it shows that the call type (e.g., Boston service) is then itself associated with a "Scheduling Group" that has two or more "management units" at a third level. As can be seen, agents within an MU typically have more than one skill.

## PATENT

Thus, the "hierarchy" can be described in a shorthand form as: BU (first level) → contact type (second level), where contact types are expected to be present at multiple contact center sites (how the contacts get routed there is not the invention) → two or more multi-agent MUs within a given contact center site.

The present invention schedules multi-skill agents within this operating environment. Skills-based ACD routing – the Klenke subject matter – is something else entirely.

Stated another way, neither Klenke nor any other reference (e.g., Crockett '292 or '355) disclose or suggest any such subject matter. Thus, they cannot (and do not) teach the claimed subject matter that specifies this "hierarchy" and how it is used in the inventive method, – e.g. (in claim 1): "creating a set of contact allocations that define how contacts are hierarchically distributed from a given business unit to multiple contact types..." and "creating a set of requirement allocations that define how agent requirements are hierarchically distributed from two or more contact types to two or more management units..."

The Office bears the burden of establishing a *prima facie* case of obviousness of the subject matter "as a whole." Nothing in the record meets this standard. The claims have once been considered novel and non-obvious, and the former § 101 rejection has been overcome.

Applicant respectfully requests a Notice of Allowance.

Respectfully submitted,

By: 

David H. Judson, Reg. No. 30,467

ATTORNEY FOR APPLICANTS

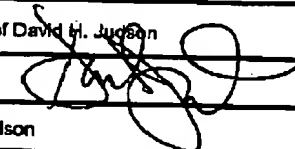
PTO/SB/21 (09-04)

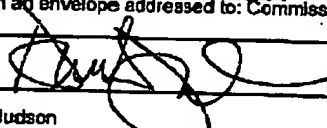
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ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement  <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation <input type="checkbox"/> Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
Remarks Proposed claim amendments for entry by Examiner		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	Law Office of David H. Judson		
Signature			
Printed name	David H. Judson		
Date	November 24, 2004	Reg. No.	30,467

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.			
Signature	 fax (703) 746-7390		
Typed or printed name	David H. Judson	Date	November 24, 2004

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:	Leamon
Serial Number:	09/504,330
Filing Date:	February 14, 2000
Art Unit:	3625
Examiner:	Garg
For:	<b>METHOD AND SYSTEM FOR SKILL-BASED PLANNING AND SCHEDULING IN A WORKFORCE CONTACT CENTER ENVIRONMENT</b>

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
703-746-7390 (fax)

**PROPOSED CLAIMS FOR EXAMINER INTERVIEW**

Please cancel claims 14, 23 and 31, and amend claims 1, 3, 5, 7, 13, 17, 19-22, 24, 26, 28 and 30 as follows.

11/24/04 Subsequent to receiving this fax  
Attorney Judson agreed to cancel claim  
30.  
Ex. Garg



## PATENT

1. (currently amended) A method of allocating and scheduling requirements for agents in a multiple location, skills-based contact center environment organized into a hierarchy of one or more [business units] aggregated contact types at a first level, [two or more] multiple contact types at a second level, and two or more management units at a third level, comprising the steps of:

(a) creating a set of contact allocations that define how forecasted contacts are [hierarchically distributed] allocated from [a given business unit] each of the one or more aggregated contact types at the first level to the multiple contact types at the second level, with each contact type of the multiple contact types at the second level being defined by one or more queues all located at a geographically distinct location, there being at least two or more geographically distinct locations in the multiple location, skills-based contact center environment, wherein the step of creating a set of contact allocations allocates the forecasted contacts using agent availability data per each of the contact [type] types of a given aggregated contact type and each time interval to be allocated, and wherein agent availability data is predicted by schedule simulation of agents working their schedules and handling contacts in [a] the skills-based contact center environment;

(b) creating a set of agent requirement allocations that define how agent requirements are [hierarchically distributed] allocated from [two or more] the multiple contact types to two or more management units, each management unit defining a collection of agents at least some of whom have multiple skills, wherein the step of creating a set of agent requirement allocations allocates the forecasted agent requirements using agent availability data per each of the contact [type] types of a given aggregated contact type and each time interval to be allocated, wherein the agent availability data is predicted by schedule simulation of agents working their schedules and handling contacts in [a] the skills-based contact center environment;

(c) allocating forecasted contacts and forecasted agent requirements based on the created contact and agent requirement allocations;

(d) using the allocated forecasted agent requirements to generate a schedule for each of the plurality of scheduled agents; and

**PATENT**

(e) repeating steps (a) – (d) until an output of a set of contact allocations and a set of agent requirement allocations occurs;

wherein at least the schedule simulation and at least one of steps (c)-(e) are performed at least in part through one or more processing devices.

## PATENT

3. (currently amended) The method as described in Claim 2 wherein the created agent requirement allocations are minimum agent requirement allocations.

5. (currently amended) The method as described in Claim 4 wherein the created agent requirement allocations are maximum agent requirement allocations.

7. (currently amended) The method as described in Claim 6 wherein the created agent requirement allocations are minimum and maximum agent requirement allocations.

13. (currently amended) The method as described in Claim 1 wherein a management unit is [a collection of agents] located at a given contact center location in the multiple location, skills-based contact center environment.

14. (canceled).

## PATENT

17. (currently amended) A method of allocating and scheduling in a multi-location, skills-based call center environment, comprising the steps of:

organizing the call center environment into a hierarchy of one or more [business units] aggregated call types at a first level, [two or more call contact] multiple call types at a second level, and a set of two or more management units at a third level;

(a) having a user create a set of given call allocations that define how calls are [distributed from a given business unit] allocated from each of the one or more aggregated call types at the first level to the multiple call types at the second level, with each call type of the multiple call types at the second level being defined by one or more queues all located at a geographically distinct location, there being at least two or more geographically distinct locations in the multiple location, skills-based call center environment;

(b) having the user create a set of given agent requirement allocations that define how agent requirements are [distributed] allocated from [a] the multiple call [type] types to two or more management units, each management unit defining a collection of agents at least some of whom have multiple skills;

(c) predicting agent availability by call type using a schedule [simulator] simulation to generate agent availability data, wherein the simulation data corresponds to agents working their schedules and handling contacts in [a] the multi-location, skills-based, contact center environment;

(d) allocating forecasted calls and forecasted agent requirements based on the given call and requirement allocations and the agent availability data;

(e) using the allocated forecasted agent requirements to generate a schedule for each of the plurality of scheduled agents; and

(f) repeating the steps (a) –(e) until an output of a set of [contact] call allocations and a set of requirement allocations occurs;

wherein at least the schedule simulation and at least one of steps (c)-(e) are performed at least in part using one or more processing devices.

**PATENT**

19. (currently amended) The method as described in Claim 17 wherein the given call allocations and the given agent requirement allocations are minimum values.

20. (currently amended) The method as described in Claim 17 wherein the given call allocations and the given agent requirement allocations are maximum values.

21. (currently amended) The method as described in Claim 17 wherein the given call allocations and the given agent requirement allocations are minimum and maximum values.

## PATENT

22. (currently amended) An allocation method operative in a multi-location, skills-based [call] contact center environment, comprising [the steps of]:

(a) organizing the [call] contact center environment into a hierarchy of one or more [business units] aggregated contact types at a first level, [two or more call] multiple contact types at a second level, and a set of two or more management units at a third level;

(b) allocating a percentage of incoming [calls] contacts from [a given business unit] each of the one or more aggregated contact types at the first level to [two or more call] the multiple contact types at the second level, with each contact type of the multiple contact types at the second level being defined by one or more queues all located at a geographically distinct location, there being at least two or more geographically distinct locations in the multiple location, skills-based contact center environment;

(c) allocating agent requirements for a given [call] contact type to one or more management units by predicting agent availability data using a schedule simulation of agents working their schedules and handling contacts in [a] the multi-location, skills-based contact center environment, each management unit defining a collection of agents at least some of whom have multiple skills;

(d) using the allocated forecasted agent requirements to generate a schedule for each of the plurality of scheduled agents; and

(e) repeating steps (b)-(d) until an output of a set of contact allocations and a set of requirement allocations occurs;

wherein at least the schedule simulation and at least one of steps (c)-(d) are performed at least in part using one or more processing devices.

**PATENT**

23. (canceled)

24. (currently amended) The method as described in Claim 22 wherein a given [call] contact type is associated with a given automatic call distributor (ACD).

## PATENT

26. (currently amended) An allocation method operative in a multi-location, skills-based contact center environment, comprising [the steps of]:

(a) organizing the contact center environment into a hierarchy of one or more [business units] aggregated contact types at a first level, [two or more] multiple contact types at a second level, and a set of two or more management units at a third level;

(b) allocating a percentage of contacts from [a given business unit] each of the one or more aggregated contact types at the first level to [two or more] the multiple contact types at the second level, with each contact type of the multiple contact types at the second level being defined by one or more queues all located at a geographically distinct location, there being at least two or more geographically distinct locations in the multiple location, skills-based contact center environment;

(c) allocating agent requirements for the [two or more] multiple contact types to two or more management units by predicting agent availability data using a schedule simulation of agents working their schedules and handling contacts in [a] the multi-location skills-based contact center environment;

(d) using the allocated forecasted agent requirements to generate a schedule for each of the plurality of scheduled agents;

(e) repeating steps (b)-(d) until an output of a set of contact allocations and a set of requirement allocations occurs;

wherein at least the schedule simulation and at least one of steps (c)-(d) are performed at least in part using one or more processing devices.

28. (currently amended) The method as described in Claim 26 wherein a given contact type is associated with a [given automatic work] contact distributor:



## PATENT

30. (currently amended) An allocation method operative in a multi-location, skills-based work environment organized into a hierarchy of [two] one or more aggregated task types at a first level, multiple task types at a second level, and a set of two or more management units at a [second] third level, comprising [the steps of]:

(a) creating a set of given requirement allocations that define how agent requirements are [hierarchically distributed] allocated from [a task type] the multiple task types to two or more management units, wherein each task type of the multiple task types at the second level are expected to be handled at a geographically distinct location, there being at least two or more geographically distinct locations in the multiple location, skills-based work environment, and wherein each management unit is defined by a collection of agents at least some of whom have multiple skills;

(b) predicting agent availability by task type by schedule simulation to generate agent availability data, wherein the agent simulation data comprises a simulation of agents working their schedules and handling tasks in [a] the multi-location, skills-based work environment;

(c) allocating forecasted agent requirements based on the given requirement allocations and the agent availability data;

(d) using the forecasted agent requirements to generate a schedule for each of the plurality of scheduled agents; and

(e) repeating steps (b) – (d) until an output of a set of contact allocations and a set of requirement allocations occur;

wherein at least the schedule simulation and at least one of steps (c)-(d) are performed at least in part using one or more processing devices.